

Material Certificate

Material Code M0993

Revision 00

Type HDPE Brand name HDPE 5502

Supplier TOTAL PETROCHEMICALS

Sterilization Stablity:

	Compliant	Comments
Gamma Sterilization	YES	25 KGy
Ethylene Oxyde	YES	-

Biocompatibility Data:

	Compliant	<u>Standard</u>	Comments
USP Class VI	YES	USP	-
Cytotoxicity	YES	ISO 10993-5	-
Sensitization	YES	ISO 10993-10	-
Irritation or intracutaneous	YES	ISO 10993-10	-
reactivity			
Systemic toxicity (acute)	YES	ISO 10993-11	-
Hæmocompatibility	YES	ISO 10993-4	-

Main Regulatory Compliances:

	Compliant	Comments
ВРА	YES	Not used in the manufacturing process
CONEG (Cadmium, chromium, lead and mercury)	YES	Not used in the manufacturing process
Drug Master File	YES	-
Food Contact	YES	-
European Directive 2002/95/EC & 2011/65/UE - RoHS/RoHS2	YES	Not used in the manufacturing process
Latex or Natural Rubber	YES	Not used in the manufacturing process
Phthalates	YES	Not used in the manufacturing process
TSE / BSE	YES	Not used in the manufacturing process
European Directive (EC 1907/2006) REACH	YES	-
SVHC List	YES	Not used in the manufacturing process
MSDS	YES	-

Technical Characteristics:

	<u>Value</u>	Measuring Method	<u>Comments</u>
Injection	YES	-	-
Density	0.955 g/cm3	ASTMD 792	-
Melt Flow Rate	0.35 g/10min		-
Tensile Strength at Yield	400 psi	ASTMD 638, Type IV	-
Other mechanical property 1	600 %	D-638, Type IV	Elongation at break
Other mechanical property 2	200000 psi	ASTMD 590	Flexural Modulus

R&D Validation	FRA	QA/RA Validation	CGI
Date	23-11-2017	Date	23-11-2017